

REMARKS

Claims 1 and 6-26 are pending in the application. Applicants note with appreciation the allowance of claims 1 and 6-19, and the provisional allowance of claims 22-23. Reconsideration of the application is respectfully requested in view of the following considerations.

I. REJECTION OF CLAIM 20-21 UNDER 35 U.S.C. § 103.

Claims 20-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Long (US Patent No. 6,560,276) in view of van den Elzen (US Patent No. 4,117,277). Withdrawal of this rejection is respectfully requested for at least the following reasons.

The prior art of record does not teach a “first finite impulse response (FIR) filter” and a “second finite impulse response filter” as recited in claim 20.

As presented, claim 20 includes the following elements:

- g. periodically adjusting first coefficient values supplied as input to a first finite impulse response (FIR) filter in response to the second clock signal, and
- h. periodically adjusting second coefficient values supplied as input to a second finite impulse response filter in response to the third clock signal.

It has been alleged that van den Elzen teaches these elements. The Applicants' attorneys respectfully disagree.

In Fig. 5, van den Elzen illustrates a detailed view of Fig. 4's echo canceller (12). (Fig. 5; col. 10, lines 39-40). Careful review of Fig. 4 and Fig. 5 reveals that Fig. 5 teaches a single adaptive filter (13) that consists of elements 36-47. Therefore, van den Elzen cannot teach elements g. and h. of claim 20, which explicitly recite “a first” filter and “a second” filter. Moreover, because van den Elzen teaches only a single adaptive filter 13, it in no way teaches “first coefficient values supplied as input to a first finite impulse response (FIR) filter” and “second coefficient values supplied as input to a second finite impulse response (FIR) filter.”

Similarly, Long fails to disclose these elements. Therefore, the prior art of record does not teach all elements of presently presented claim 20.

It would be improper to combine van den Elzen with Long.

Even if the combination of van den Elzen and Long did teach all elements of claim 20, it would be improper to combine van den Elzen with Long. In order to properly combine references, there must be some suggestion or motivation to combine or modify the references. See MPEP § 2143. Although it is alleged that the motivation for combining these references is that the ensuing design “achieves a high relative data rate,” it is unclear how, in fact, such a design would be realized.

For example, van den Elzen teaches an adaptive filter 13 that requires four control signals S1, S2, S3, and S4; and two inputs. (Fig. 4; Fig. 5; and col. 10-11, lines 48-13). Each control signal S1, S2, S3, and S4 has its own particular frequency at which it operates. These frequencies are $1/T$, X/T , XY/T , and $1/(RT + T)$, respectively. In short, van del Elzen’s adaptive filter is an intricate scheme that requires specific control signals and inputs. See *generally* col 10-12.

While Long may mention the use of an “adaptive filter” in Fig.14 and Fig. 19, it is unclear how a person of ordinary skill in the art could modify Long to include the teachings of van den Elzen. Long does not disclose providing four control signals with different frequencies to its adaptive filter. In fact, Long does not teach providing any control signals beyond the basic inputs. Given van den Elzen’s detailed requirements and the complex circuitry of Long, modifying Long’s adaptive filter to include four control signals constitutes a serious challenge. Consequently, no motivation exists for the combination because there is no reasonable expectation of success. Thus, the combination is improper. Accordingly, withdrawal of the rejection is respectfully requested.

II. REJECTION OF CLAIMS 24-26 UNDER 35 U.S.C. § 103.

Pending claims 24-26 were rejected under 35 U.S.C. § 103(a) over van den Elzen in view of Long, and further in view of U.S. Patent No. 5,768,281 (Takano) and U.S. Patent No. 6,459,746 (Agazzi). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Takano and Agazzi fail to cure the deficiencies of van den Elzen and Long.

Applicants have shown that van den Elzen and Long fail to teach all the limitations of claim 20. Neither Takano nor Agazzi cure these deficiencies. As claims 24-26 depend from claim 20, the applicants reiterate those arguments from above and respectfully request withdrawal of the rejection.

III. CLAIM OBJECTIONS

Claims 22-23 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As independent claim 20 is now believed to be allowable, claims 22-23 no longer depend from a rejected base claim. Accordingly, withdrawal of these objections is respectfully requested.

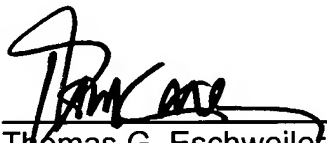
IV. CONCLUSION

For at least the above reasons, pending claims currently under consideration are believed to be in condition for allowance and notice thereof is requested.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

In addition, should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, INFNP117US.

Respectfully submitted,
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CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: March 10, 2006


Christine Gillroy